

REMARKS

Claims 1-13, 15, 16, and 18-46 are pending. Claims 1, 24, and 31 have been amended to improve their clarity.

Claims 1, 22-24, 29-31, 34, and 42-44 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. No. 6,391,558 to Henkens et al. Applicants respectfully traverse this rejection.

Claim 1 recites a system for assaying one or more targets in a sample. The system includes, *inter alia*, an electric or electronic module arranged and configured to measure electric conductance between electrodes of each assay set. In addition, the system includes reagents formulated to deposit a conductive substance onto a complex formed between a recognition moiety and a target. The conductive substance, when deposited onto the complex, forms a conductive bridge between the electrodes.

Henkens et al. discloses an electrochemical detector in which an *induced current* is measured. The current measured by the detector disclosed by Henkens et al. is produced by an electrochemical reaction. See col. 4, lines 35-40. According to Henkens et al., electric current is generated when an electric potential is applied to a working electrode after attached nucleic acid segments are hybridized or annealed with a target nucleic acid. See col. 4, lines 57-61, col. 14, lines 33-41, and Figs. 3 and 5, for example. Henkens et al. does not anticipate the present invention in which systems measure electrical conductance of a formed conductive bridge.

Moreover, as noted above, Henkens et al. discloses that the electrical current is generated by nucleic acid segments hybridized or annealed with a target nucleic acid. Henkens et al. does not disclose reagents formulated to deposit a conductive substance onto a complex formed between a recognition moiety and a target. Consequently,

Henkens et al. does not teach that the conductive substance, when deposited onto the complex, forms a conductive bridge between the electrodes. (Henkens et al. discloses depositing colloidal gold on each working electrode of a sensor and allowing the sensor to dry. Col. 43, lines 55-64. This teaching of coating an electrode by Henkens et al. does not anticipate depositing a conductive substance that forms a conductive bridge between electrodes.) Claim 1 is patentable over Henkens et al. Claims 2-9, 18-23, 38, and 43-44 depend from claim 1 and are patentable for at least the same reasons.

Claim 24 recites a method for assaying one or more targets in a sample by, *inter alia*, contacting an assay device with reagents to deposit a conductive substance onto the complex formed between a recognition moiety and a target. The conductive substance deposits onto the complex and forms a conductive bridge between electrodes. The electrodes are connected to a module to measure conductance.

As noted above, Henkens et al. measures the electrochemically generated current of labeled nucleic acid segments hybridized or annealed with a target nucleic acid. Henkens et al. does not teach a conductive bridge formed between electrodes by a conductive substance deposited on a complex, nor does it teach measuring conductance between the electrodes. Claim 24 is patentable over Henkens et al. Claims 29, 30, 39, 40, 42, and 45 depend from claim 24, and are patentable for at least the same reasons.

Claim 31 recites a kit for use in assaying one or more targets in a sample. The kit includes, *inter alia*, reagents formulated to deposit a conductive substance onto a complex formed between a recognition moiety and a target. The conductive substance, when deposited onto the complex, forms a conductive bridge between electrodes of the set.

Henkens et al. discloses apparatus for measuring the electrochemically generated currents. Henkens et al. does not disclose a kit that includes reagents formulated to deposit a conductive substance onto a complex formed between a recognition moiety and a target, the conductive substance, when deposited onto the complex, forming a conductive bridge between electrodes of the kit. Claim 31 is patentable over Henkens et al. Claims 32, 33, and 40 depend from claim 31, and are patentable for at least the same reasons.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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